We claim:

1. A composite element having the following layer structure:

(i) 2-20 mm of metal,

(ii) 10-100 mm of compact polyisocyanate polyaddition products obtainable by reacting (a) isocyanates with (b) polyether polyalcohols, if desired in the presence of (c) catalysts and/or (d) auxiliaries and/or additives,

(iii) 2-20 mm of metal.

2. A composite element as claimed in claim 1, wherein component (b) is a mixture comprising:

(b1) from 40 to 99% by weight of polyether polyalcohol having a mean functionality of from 1.5 to 2.99 and a mean molecular weight of from 400 to 8000 and

(b2) from 1 to 60% by weight of polyether polyalcohol having a mean functionality of from 3 to 5 and a mean molecular weight of from 150 to 8000.

3. A composite element as claimed in claim 2, wherein (b) is a mixture comprising:

(b1) from 40 to 98% by weight of polyether polyalcohol having a mean functionality of from 1.5 to 2.99 and a mean molecular weight of from 400 to 8000,

(b2) from 1 to 60% by weight of polyether polyalcohol having a mean functionality of from 3 to 5 and a mean molecular weight of from 150 to 8000 and

(b3) from 1 to 50% by weight of at least one compound which is reactive toward isocyanates and has a hydrocarbon skeleton comprising from 10 to 40 carbon atoms and from 2 to 4 groups which are reactive toward isocyanates.

4. A composite element as claimed in claim 1, wherein (ii) comprises from 10 to 70% by weight of fillers, based on the weight of (ii), as (d) auxiliaries and/or additives.

5. A composite element as claimed in claim 1, wherein (ii) has a modulus of elasticity of >275 MPa in the temperature range from -45 to +50°C, an adhesion to (i) and (iii) of >4 MPa, an elongation of >30% in the temperature range from -45 to +50°C, a tensile strength of >20 MPa and a compressive strength of >20 MPa.

6. A process for producing a composite element as claimed in any of claims 1 to 5, wherein compact polyisocyanate polyaddition products which adhere to (i) and (iii) are prepared between (i) and (iii) by reacting (a) isocyanates with (b) polyether polyalcohols, if desired in the presence of (c) catalysts and/or (d) auxiliaries and/or additives.

7. A composite element obtainable by a process as claimed in claim 6.

8. A composite element as claimed in claim 7 which has the properties setforth in claim 5.

9. The use of a composite element as claimed in any of claims 1 to 5, 7 or 8 as a structural component in shipbuilding, for example in ships' hulls and hold covers, or in civil engineering constructions, for example bridges.

10. A ship or bridge comprising a composite element as claimed in any of claims 1 to 5, 7 or 8.